



# An Introduction to Your Septic System

## Fact Sheet

Septic systems can provide effective, long-term wastewater treatment for homes not connected to a sewer system. Regular monitoring and maintenance can have a significant impact on how well your system works and how long it lasts.

### How does my septic system work?

Wastewater from your sinks, toilets, showers, laundry, dishwasher and other household plumbing fixtures drains through a pipe from your home into your septic tank. Your septic tank is designed to hold the wastewater long enough to allow solids to settle at the bottom and oil and grease to float to the top. Natural bacteria in

the tank start to break down the solids; however, eventually the solids build up and must be pumped out.

The partially treated wastewater from your tank flows through an outlet into a distribution box. The box evenly distributes the discharged wastewater into a network of pipes underneath the drainfield. The wastewater begins to percolate into the soil through small holes in the pipes. Natural filtration and microorganisms in the soil remove any remaining harmful particles in the wastewater. The treated and cleansed wastewater passes into the groundwater and returns to the water cycle.

### Why should I care for my septic system?

**Save money.** A failing septic system can be expensive to repair or replace. You can protect yourself against costly surprises through regular maintenance and proper care.

#### Protect the health of your family.

A failing septic system can release untreated or partially treated wastewater right in your backyard. Human wastewater contains disease causing organisms and can pose health risks to your family and your neighbours.

**Protect water quality.** We all depend on clean water. A septic system uses the environment to treat wastewater. A failing system can pollute our streams, lakes, shorelines and groundwater.

### Signs of Septic System Failure

It is time to call a registered practitioner or qualified professional if you notice any of the following:

- Slowly draining sinks and toilets
- Gurgling sounds in the plumbing
- Unpleasant odours around your property
- Patches of lush growth or soggy or wet ground over the drain field
- Sewage surfacing

**Don't** wait for signs of failure. Check your septic system regularly.

## How do I care for my septic system?

Here are ten steps you can take to care for and maintain your system:

1. Locate the components of your septic system and make sure they are easy to access.
2. Check the operation of your system annually and look for signs of failure (see Signs of Failure).
3. Have your septic tank pumped regularly – every two to five years depending on tank size and usage. Combine the pump-out with a professional inspection of all system components.
4. If you have a package treatment plant, set up a regular maintenance contract according to your maintenance plan.
5. Keep an up-to-date maintenance record.
6. Consider installing an effluent filter to reduce the amount of solids entering the drain field.
7. Reduce your water consumption. Using too much water will flush solids into the drain field before they can settle in the tank.
8. Use septic-safe cleaning products. Some chemicals can upset the balance of bacteria in the tank.
9. Properly dispose of hazardous products – don't pour them down the drain.
10. Protect your drainfield. Do not park, drive or build on it. Do not overwater the soil or plant trees or bushes on the field – the roots can damage your system. Divert surface water away from the area.

### Regulations

The *BC Public Health Act Sewerage System Regulation* requires an Authorized Person to design, install, repair or maintain a septic system. Authorized Persons are qualified registered practitioners or professionals who meet the requirements of the regulation.

As a homeowner you are responsible for ensuring your septic system is being properly maintained. If your system was installed after 2005, you are required to have an Authorized Person conduct regular maintenance on your system according to your maintenance plan.

Systems constructed before 2005 may not have a maintenance plan. If you do not have a maintenance plan for your system, an Authorized Person can create one for you.

To find a registered practitioner in your area contact:

Applied Science Technologists & Technicians of BC - Onsite Wastewater Registration Program

<https://owrp.asttbc.org/rowp-finder/>

To find a qualified professional in your area contact:

Association of Professional Engineers and Geoscientists of British Columbia

<https://www.egbc.ca/Member-Directories/Professionals-for-Sewerage-System-Regulation>

# Caring For Your Septic System

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Septic systems are biological systems which treat wastewater. The septic tank contains bacteria that slowly digest solids. These bacteria are sensitive and can easily be upset by commercial household cleaners and chemical products.

The soil in the drainfield contains microorganisms which are also sensitive to harmful chemicals. These chemicals can pass through the soil polluting our ground and surface water.

The best approach to keeping a septic system healthy, while protecting the environment, is to not let anything harmful go down the drain, and don't neglect regular pumping and inspection of your system.

### Additional Septic Care Tips

- Recycle or properly dispose of household hazardous products. Do not pour them down the drain or put them in the garbage.
- Do not use your toilet or drains as a trash can. Cooking grease, fats, cigarette butts, disposable wipes, sanitary napkins, hair, plastics, lint, metal, rubber, coffee grounds, and cat litter should all be kept out of your septic system.
- Do not use a garburator unless your system is designed to accommodate the additional water and organic loads created from these devices. Instead compost your kitchen scraps.
- Do not use septic tank starters, additives or similar products. There is already naturally occurring bacteria in wastewater which will stimulate the natural biological activity in your system.

### The best cleaning products happen to also be the most affordable:

- Baking soda for tubs, toilets and sinks
- Vinegar for windows and mirrors
- Lemon to make it all smell nice

### Recipes for alternative cleaning products:

#### All purpose cleaner:

- » Mix ½ cup vinegar and 1 – 4 cups of warm water.

#### Natural laundry whitener:

- » To whiten whites, add ½ cup baking soda to each load.

#### Toilet bowl cleaner:

- » Sprinkle a few tablespoons of baking soda and scrub with a brush, add a few drops of lemon for freshness.

The most harmful cleaning products are the ones with warning symbols or complex chemical names on the containers.

### Stay away from cleaners like these:

- Granular drain cleaner. One tablespoon may kill all of the beneficial bacterial in your septic tank. Catch hair, food bits and other solids before they go down the drain by using sink screens.
- Powdered laundry soap. It has filler in it that can clog septic pipes and soil. Liquid laundry soap is much easier on septic systems.

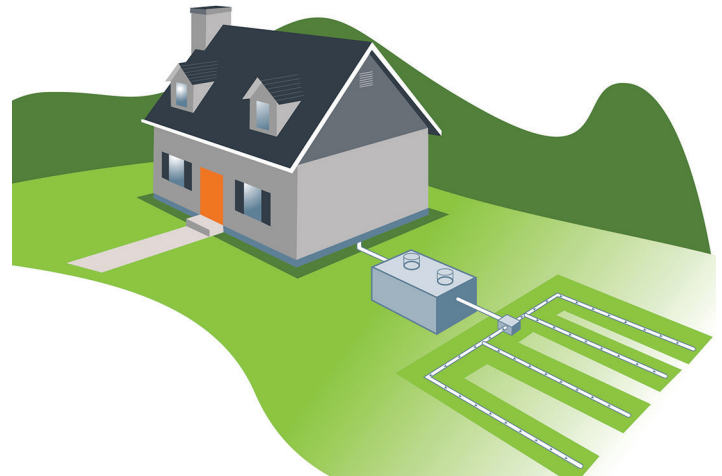
### Alternative drain cleaner:

- » Pour ½ cup baking soda down the drain. Follow with ½ cup white vinegar. Cover and let sit for 15 minutes. Flush with 2 litres of boiling water. (do not use in your toilet – it may crack)

# Caring for your Septic System Drainfield

The drainfield includes a network of buried pipes as well as the soil beneath those pipes. Partially treated wastewater from your septic tank is evenly distributed into a network of pipes underneath the drainfield where it is slowly released into the surrounding soil. Natural filtration and microorganisms in the soil remove any remaining harmful particles in the wastewater. The treated and cleansed wastewater then passes into the groundwater and returns to the water cycle.

The drainfield is the most complicated and expensive part of the septic system to repair or replace – it is a substantial investment. Treating it right and protecting it from damage can save you money and protect water quality and your family's health.



## ✓ Drainfield “Do’s”

- Do plant grass over the drain field. Grass is ideal because it has shallow roots.
- Do use an effluent filter. An effluent filter fits securely in your outlet T and is highly effective at keeping solids out of the drainfield.
- Do direct drainage from roof gutters and impervious surfaces away from the drainfield. Extra water can saturate the soil and interfere with its capacity to treat wastewater.
- Do ensure your tank and drainfield are easily accessible for regular inspection and maintenance.
- Do ensure water lines are at least 10 feet from all components of a septic system.

## ✗ Drainfield “Don’ts”

- Do not drive over the drainfield. The pressure of vehicles compacts the soil and can damage pipes.
- Do not create vegetable gardens over the drainfield. Vegetables need watering and excess water reduces the soil’s ability to treat wastewater. Garden bed preparation and plant roots can also damage the drainfield pipes.
- Do not plant trees or shrubs on or near the drainfield. Trees and shrubs can have extensive root systems that seek out and grow into wet areas such as drainfields. If trees are being considered for nearby, consult an expert to determine an appropriate species.
- Do not use landscape fabric, plastic or mulch over the drainfield. These reduce the necessary air exchange that the aerobic bacteria in the soil need to function. Oxygen is critical to the proper breakdown of sewage by soil microorganisms.
- Do not construct patios, buildings or other impermeable surfaces over the drainfield. Concrete and asphalt reduce evaporation and the supply of oxygen to the soil.



# Water Conservation and Your Septic System

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Minimizing water use is key to a healthy septic system. Low flow appliances, water saving devices and efficient water-use practices can improve the function of your system by allowing for a longer separation and treatment time. It is also important to avoid running multiple water-using appliances at the same time or back-to-back to prevent too much water from entering the system over a short period of time.

Septic systems are designed to hold wastewater long enough to allow solids to settle to the bottom of the tank forming a sludge layer and oil and grease to float to the top forming a scum layer. If too much

water is flowing into the septic tank, wastewater is pushed out into the drainfield before this separation process has time to occur.

Solids pushed out into the drainfield and can cause pipes and soils to become clogged. This can be expensive to fix. Minimizing water use improves the effectiveness of your system and extends the life of the system.

Following efficient water-use practices is especially important if you have an older septic system. Older systems were designed when people used less water, meaning if your system is older it may be under capacity compared to today's standards.

### Tips for Conserving Water

Retrofitting your home for water efficiency is easy. New technology allows huge reductions in water use with the same or better performance than older technology. Install low flow showerheads and faucets and replace older, water-guzzling toilets and appliances with more water efficient versions.

Unnecessary water use can also add up to large volumes and is totally avoidable. Ensure that toilets and faucets aren't leaking and when performing simple tasks such as brushing teeth and doing dishes, make sure to turn the tap off.



### Check for Leaks

Check for leaks. High volume water leaks often come from toilets. They can be hard to detect and are usually caused by worn or misaligned parts. A toilet that continues to run after flushing could be wasting 20-40 litres of water per hour. To check for a toilet leak, place a dye tablet or food colouring in the toilet tank. Wait about 15 minutes, without flushing, and then check the water in your toilet bowl. If the water is coloured, you've got a leak. Toilet repairs may require the assistance of a plumber.